



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/909,206	07/20/2001	Michael D. Kotzin	CS10422	9769

7590 11/03/2004

Roland K. Bowler II
Motorola, Inc.
Intellectual Property Section, Law Department
600 North U.S. Highway 45, AN475
Libertyville, IL 60048

EXAMINER

DANIEL JR, WILLIE J

ART UNIT PAPER NUMBER

2686

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/909,206

Applicant(s)

KOTZIN ET AL.

Examiner

Willie J. Daniel, Jr.

Art Unit

2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. **Claim 5** (amended) is objected to because of the following informalities: Applicant indicates “information before receiving the service information” to be amended” to be the added portion. Examiner interprets as “before receiving the service information”.
Appropriate correction is required.
2. **Claim 13** (amended) is objected to because of the following informalities: Applicant deletes [a] but failed to indicate “the” as being added. Examiner interprets as “**the**”.
Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-13, 15-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Spaur et al. (hereafter Spaur) (US 6,516,192 B1).

Regarding **Claim 1**, Spaur discloses a method in a mobile unit (10) which reads on the claimed “wireless communication device” for dynamically selecting communication services from different networks which reads on the claimed “plurality of service providers” capable of providing communication services to the mobile wireless communication device (see col. 5, line 40 - col. 6, line 19; col. 6, lines 52-67; col. 13, lines 13, 49-51; Figs. 1-4),

Art Unit: 2686

where the mobile unit (10) includes the communication system (10) that has a network selection apparatus (14) for selecting to communicate with different networks according to the services provided, comprising:

“establishing communication objectives (i.e. applications) at the device (10) for corresponding communications to be executed by the device (10);” as disclosed by, “With reference to FIGS. 2 – 4, additional details of the analysis involving the channel selection process..... FIGS. 2A - 2B illustrate a flow diagram of steps taken in selecting a network channel (i.e. communication service). The description of this flow diagram will be made in the context of a particular application (defined as application A) (i.e. communication objective) that has certain application requirements (i.e. factors or characteristics), as set out in the chart of FIG. 3. In particular, application A requirements include a number of factors with quantitative values. These factors are bandwidth, security, packet loss, packet latency, packet jitter and cost..... As indicated in FIG. 2A, the application requirements for application A are obtained in accordance with step 100” (see Figures 1 – 3 and column 10 lines 41 – 61)

Spaur discloses, “As indicated in FIG. 2A, the application requirements for application A (i.e. communication objective) are obtained in accordance with step 100 and the corresponding operating parameters for each network channel 34a-34n (i.e. communication services) are obtained at step 104. The link selector 64 checks or compares each application requirement with the corresponding parameter, for each such network channel, at step 108.... In view of the given weightings, the slower, less expensive channel 34b is deemed to be more suitable for conducting the information transfer associated with

Art Unit: 2686

application A.” (see Figures 1 – 4 and column 10 line 60 – column 12 line 12), which directly reads on “selecting one of the communication services (i.e. channels) for each communication to be executed by the device based on the corresponding established communication objectives (i.e. applications)”;

Spaur further discloses “After analysis is completed, the link selector **64** communicates with protocol stack **26** in order to modify its configuration so that protocol stack **26** generates the correct network address or addresses for the selected network channel(s).” (see Figure 1 column 10 lines 24 – 28), which reads on, “utilizing the selected communication service (i.e. channel) at least for the communication whose communication objective (i.e. application) formed the basis upon which the communication service (i.e. channel) was selected.”

Regarding **Claim 2**, Spaur discloses the method as set forth in **claim 1**, further comprising:

“assessing the plurality of communication services (i.e. channels) relative to the communication objective (i.e. applications) for each communication before selecting one of the communication services.” as disclosed by, “As indicated in FIG. **2A**, the application requirements for application A (i.e. communication objective) are obtained in accordance with step **100** and the corresponding operating parameters for each network channel **34a-34n** (i.e. communication services) are obtained at step **104**. The link selector **64** checks or compares each application requirement with the corresponding parameter, for each such network channel, at step **108**” (see Figures 1, 2 and column 10 lines 60 – 66)

Regarding **Claim 3**, Spaur discloses the method as set forth in **claim 1**, further comprising:

“assessing a plurality of communication services (i.e. channels) relative to the communication objective (i.e. applications) for each communication during a communication.” as disclosed by, “In addition to an initial selection of a network channel (i.e. communication services) when the information transfer is started, the system is able to dynamically adapt to situations where the currently used network channel (i.e. communication service) becomes unavailable or inappropriate and the transfer of information has not yet been completed. Relatedly, the system is able to switch network channels (i.e. communication services) within the course of a particular information transfer or session when it is determined that a more advantageous channel (i.e. communication service) is now available.” and “When appropriate or necessary, the link selector **64** can also be used to obtain additional bandwidth from a number of network channels (i.e. communication services) in order to provide more bandwidth for a given application. The link selector **64** is further available for dynamically changing the current network channel (i.e. communication service) being utilized for a transfer to a different network channel (i.e. communication service), based on changing communication and economic conditions.” and “The link selector **64** checks or compares each application requirement (i.e. communication objective) with the corresponding parameter, for each such network channel (i.e. communication service)” (see column 2 lines 9 – 18, column 10 lines 33 – 40, and column 10 lines 63 – 66)

Regarding **Claim 4**, Spaur discloses the method as set forth in **claim 1**, further comprising:

“receiving service information (i.e. operating parameters) from the plurality of service providers (inherent in Spaur as the originators of the communication services (i.e. channels)) at the device (10), assessing the communication services (i.e. channels) by comparing the service information (i.e. operating parameters) received from the corresponding service providers at the device.” as disclosed by, “The network channel selection apparatus **14** also includes a link controller/monitor **50** that is operatively connected to the network interfaces **30** for receiving information there-from and making requests thereto. In particular, the link controller/monitor **50** takes responsibility for the control and status of the network channels **34a – 34n**.....The results of any such monitoring process are stored in the communication link database **54**. This database **54** also contains information or data related to the operating parameters (i.e. service information) of the network channels **34a – 34n** (i.e. communication services). These include, for example, coverage maps, pricing schedules that may be location and time dependent, schedules of availability of network channels, estimated transfer error rates and the type of channel monitoring to be conducted.” and “The network channel selection apparatus **14** further includes a link selector **64** that functions as the main controller of the system and includes one or more processing units in connection with the analyzing process for selection of one or more network channels through which information is to be transferred for the current application. With regard to conducting the analysis, the link selector **64** utilizes the application requirements for the particular application, together with the operating parameters for the network channels **34a – 34n** (i.e. communication services).” (see Figure 1 and column 9 line 37 – column 10 line 2, column 10 lines 15 – 24)

Regarding **Claim 5**, Spaur discloses the method as set forth in **claim 4**, further comprising:

“querying the plurality of service providers (inherent in Spaur as the originators of the communication services (i.e. channels)) for service information (i.e. operating parameters) before receiving the service information (see col. 9, lines 25-36; col. 10, lines 15-40; col. 5, line 40 - col. 6, line 19; col. 6, lines 52-67; Figs. 2-4), where the user interactivity can selectively choose the services of the different networks in which the before receiving would be inherent as the status of the network information can change or be updated based on the latest results.” as disclosed by, “The network channel selection apparatus **14** also includes a link controller/monitor **50** that is operatively connected to the network interfaces **30** for receiving information there-from and making requests thereto. In particular, the link controller/monitor **50** takes responsibility for the control and status of the network channels **34a – 34n** (i.e. communication services).” (see column 9 lines 37 – 42)

Regarding **Claim 6**, Spaur discloses the method as set forth in **claim 4**, further comprising:

“storing service information (i.e. operating parameters) received from the service providers (inherent in Spaur as the originators of the communication services (i.e. channels)) at the device (10), updating service information (i.e. operating parameters) at the device (10).” as disclosed by, “The link controller/monitor **50** has access to communication link database **54**..... The results of any such monitoring process are stored in the communication link database **54**. This database **54** also contains information or data related to the operating parameters (i.e. service information) of the network channels **34a – 34n** (i.e.

communication services). These include, for example, coverage maps, pricing schedules that may be location and time dependent, schedules of availability of network channels, estimated transfer error rates and the type of channel monitoring to be conducted.” and “The network channels 34a – 34n (i.e. communication services) also have dynamic characteristics or properties associated therewith. That is, during use or operation of a particular network channel, certain parameters (i.e. service information) can be checked to determine whether or not each is meeting its expected operating function. For example, retransmit requests per packet (packet loss), round trip packet travel time (packet latency), variation in interpacket travel time (packet jitter) and signal strength are measured. The results of such measurements are maintained in the communication link database 54.....” (see column 9 line 55 – column 10 line 2, column 10 lines 3 – 14)

Regarding **Claim 7**, Spaur discloses the method as set forth in **claim 1**, further comprising:

“establishing a communication objective (i.e. application) by specifying whether a communication to be executed by the device (10) is a data communication or a voice communication.” as disclosed by, “With reference to FIGS. 2 – 4, additional details of the analysis involving the channel selection process.....FIGS. 2A - 2B illustrate a flow diagram of steps taken in selecting a network channel (i.e. communication service). The description of this flow diagram will be made in the context of a particular application (defined as application A) (i.e. communication objective) that has certain application requirements (i.e. factors or characteristics), as set out in the chart of FIG. 3. In particular, application A requirements include a number of factors with quantitative values. These factors are

Art Unit: 2686

bandwidth, security, packet loss, packet latency, packet jitter and cost.....As indicated in FIG. 2A, the application requirements for application A are obtained in accordance with step 100” and “These network channels 34a – 34n are characterized by different operating parameter values that relate to the transfer of information. By way of example, these network channels 34a – 34n include a plurality of the following wireless channels: cellular digital packet data (CDPD) over which digital data is able to be sent, satellite; specialized mobile radio (SMR).....spread spectrum featured channels.....FM frequency bands.....digital audio broadcast (DAB) that provides a greater number of radio channels that can be adequately heard by the listener.....” (see Figures 1 – 3 and column 10 lines 41 – 61, column 6 lines 37 - 51).

Regarding **Claim 8**, Spaur discloses the method as set forth in **claim 1**, further comprising:

“establishing communication objectives (i.e. applications) by specifying at least on characteristic (i.e. factor) of a communication to be executed.” is disclosed by, “With reference to FIGS. 2 – 4, additional details of the analysis involving the channel selection process.....FIGS. 2A-2B illustrate a flow diagram of steps taken in selecting a network channel (i.e. communication service). The description of this flow diagram will be made in the context of a particular application (defined as application A) (i.e. communication objective) that has certain application requirements (i.e. factors or characteristics), as set out in the chart of FIG. 3. In particular, application A requirements include a number of factors with quantitative values. These factors are bandwidth, security, packet loss, packet latency, packet jitter and cost.....As indicated in FIG. 2A, the application requirements for

Art Unit: 2686

application A are obtained in accordance with step **100**" (see Figures 1 – 3 and column 10 lines 41 – 61)

Regarding **Claim 9**, Spaur discloses the method as set forth in **claim 8**, further comprising:

"assessing communication services (i.e. channels) by determining which communication service (i.e. channel) optimally satisfies the specified characteristics (i.e. factors or requirements) of the communication to be executed." as disclosed by, "As indicated in FIG. **2A**, the application requirements for application A (i.e. communication objective) are obtained in accordance with step **100** and the corresponding operating parameters for each network channel **34a-34n** (i.e. communication services) are obtained at step **104**. The link selector **64** checks or compares each application requirement with the corresponding parameter, for each such network channel (i.e. communication service), at step **108**....In view of the given weightings, the slower, less expensive channel **34b** is deemed to be more suitable for conducting the information transfer associated with application A." (see Figures 1 – 4 and column 10 line 60 – column 12 line 12).

Regarding **Claim 10**, Spaur discloses the method as set forth in **claim 1**, further comprising:

"establishing communication objectives (i.e. applications) by weighting at least one characteristic (i.e. requirement or factor) for each communication to be executed." as disclosed by, "At step **128**, the associated weighting vector for each such requirement (i.e. characteristic or factor) for application A is obtained. For example, the associated weighting vector for the bandwidth application requirement (or factor) is 0.25. Each such weighting

vector for application A requirements is obtained from the application requirements database 38.” (see Figures 2B, 4 and column 11 line 27 – line 32).

Regarding **Claim 11**, Spaur discloses the method as set forth in **claim 10**, further comprising:

“assessing the communication services (i.e. channels) by comparing the weighted characteristics (i.e. requirements or factors) of each communication to be executed to corresponding service characteristics of each of the communication services (i.e. channels).” as disclosed by, “At step 132, each such weighting vector is combined with its associated parameter value using a suitability function. The associated parameter value can be a recently measured value for a dynamically changing parameter, such as packet loss, latency and/or jitter. The suitability function defines the relationship among the parameters (i.e. characteristics) for a particular channel and their associated weighting vector.....step 140 is performed by which each of the suitability values that was determined is compared to each other.” (see Figures 3, 4 and column 11 lines 32 – 66).

Regarding **Claim 12**, Spaur discloses the method as set forth in **claim 11**, further comprising:

“selecting a communication service (i.e. channel) having service characteristics (i.e. requirements or factors) that most closely correlate with the weighted characteristics of the communication to be executed.” as disclosed by, “With respect to the network channels 34a, 34b that were found to be acceptable for selection.....In view of the given weightings, the slower, less expensive channel 34b is deemed to be more suitable for conducting the

information transfer associated with application A.” (see Figures 2B, 3, 4 and column 11 line 47 – column 12 line 12).

Regarding **Claim 13**, Spaur discloses a method in a mobile wireless communication device (10) for selecting communication services (i.e. channels) available to the mobile wireless communication device (10) (see col. 5, line 40 - col. 6, line 19; col. 6, lines 52-67; col. 13, lines 13, 49-51; Figs. 1-4), where the mobile unit (10) includes the communication system (10) that has a network selection apparatus for selecting to communicate with different networks according to the services provided, comprising:

“establishing a communication objective (i.e. application) at the device (10) by identifying a characteristic (i.e. factor or requirement) of a communication to be executed by the device (10);” as disclosed by, “With reference to FIGS. 2 – 4, additional details of the analysis involving the channel selection process.....FIGS. 2A - 2B illustrate a flow diagram of steps taken in selecting a network channel (i.e. communication service). The description of this flow diagram will be made in the context of a particular application (defined as application A) (i.e. communication objective) that has certain application requirements (i.e. factors or characteristics), as set out in the chart of FIG. 3. In particular, application A requirements include a number of factors with quantitative values. These factors are bandwidth, security, packet loss, packet latency, packet jitter and cost.....As indicated in FIG. 2A, the application requirements for application A are obtained in accordance with step 100” (see Figures 1 – 3 and column 10 lines 41 – 61).

Spaur discloses, “As indicated in FIG. 2A, the application requirements (i.e. characteristic) for application A (i.e. communication objective) are obtained in accordance

with step **100** and the corresponding operating parameters for each network channel **34a-34n** (i.e. communication services) are obtained at step **104**. The link selector **64** checks or compares each application requirement with the corresponding parameter, for each such network channel, at step **108**,” which reads on, “assessing a plurality of communication services (i.e. channels) based on communication service information, received from a plurality of at least two different networks (as well as channels or links) which reads on the claimed “communication service providers” (see col. 6, lines 52-67; col. 9, line 37 - col. 10, line 40; Figs. 2-4), by comparing the identified characteristic (i.e. requirement) of the communication to be executed with a corresponding service characteristic of each of a plurality of communication services (i.e. channels);” (see Figures 1,2 and column 10 lines 60 – 66).

Spaur further discloses, “With respect to the network channels **34a**, **34b** (i.e. communication services) that were found to be acceptable for selection.....In view of the given weightings, the slower, less expensive channel **34b** (i.e. communication service) is deemed to be more suitable for conducting the information transfer associated with application A (i.e. communication objective).” (see Figures 2B, 3, 4 and column 11 line 47 – column 12 line 12) which reads on, “selecting a communication service (i.e. channel) from the plurality of communication services (i.e. channels) having the service characteristic that correlates most closely with the identified characteristic of the communication to be executed by the device (10).”

Regarding **Claim 15**, Spaur discloses the method as set forth in **claim 13**, further comprising:

“selecting a communication service (i.e. channel) before executing the communication, and selecting a different communication service (i.e. channel) during the communication.” as disclosed by, “With respect to the network channels **34a**, **34b** that were found to be acceptable for selection.....In view of the given weightings, the slower, less expensive channel **34b** is deemed to be more suitable for conducting the information transfer associated with application A.” and “In addition to an initial selection of a network channel (i.e. communication services) when the information transfer is started, the system is able to dynamically adapt to situations where the currently used network channel (i.e. communication service) becomes unavailable or inappropriate and the transfer of information has not yet been completed. Relatedly, the system is able to switch network channels (i.e. communication services) within the course of a particular information transfer or session when it is determined that a more advantageous channel (i.e. communication service) is now available.” and “When appropriate or necessary, the link selector **64** can also be used to obtain additional bandwidth from a number of network channels (i.e. communication services) in order to provide more bandwidth for a given application. The link selector **64** is further available for dynamically changing the current network channel (i.e. communication service) being utilized for a transfer to a different network channel (i.e. communication service), based on changing communication and economic conditions.” and “The link selector **64** checks or compares each application requirement (i.e. communication objective) with the corresponding parameter, for each such network channel (i.e. communication service)” (see Figures 2B, 3, 4 and column 11 line 47 – column 12 line 12, column 2 lines 9 – 18, column 10 lines 33 – 40, and column 10 lines 63 – 66).

Regarding **Claim 16**, Spaur discloses the method as set forth in **claim 13**, further comprising:

“weighting the one or more identified characteristics (i.e. requirements or factors) of the communication to be executed,” as disclosed by, “establishing communication objectives (i.e. applications) by weighting at least one characteristic (i.e. requirement or factor) for each communication to be executed.” as disclosed by, “At step **128**, the associated weighting vector for each such requirement (i.e. characteristic or factor) for application A is obtained. For example, the associated weighting vector for the bandwidth application requirement (or factor) is 0.25. Each such weighting vector for application A requirements is obtained from the application requirements database **38**.” (see Figures 2B, 4 and column 11 line 27 – line 32)

Spaur further discloses, “At step **132**, each such weighting vector is combined with its associated parameter value using a suitability function. The associated parameter value can be a recently measured value for a dynamically changing parameter, such as packet loss, latency and/or jitter. The suitability function defines the relationship among the parameters (i.e. characteristics) for a particular channel and their associated weighting vector.....step **140** is performed by which each of the suitability values that was determined is compared to each other.” (see Figures 3, 4 and column 11 lines 32 – 66) which reads on, “assessing the communication services (i.e. channels) by comparing the weighted characteristics of the communication (i.e. application) to be executed to similarly weighted corresponding characteristics (i.e. parameter) of each of the communication services (i.e. channels).”

Art Unit: 2686

Regarding **Claim 17**, Spaur discloses a wireless communication device (10), comprising:

“means (38) for identifying a characteristic (i.e. requirement or factor) of a communication (i.e. application) to be executed by the device; is disclosed by, ”....in the context of a particular application (defined as application A) (i.e. communication) that has certain application requirements (i.e. characteristic), as set out in the chart of FIG. 3. In particular, application A requirements include a number of factors with accompanying quantitative values. These factors are bandwidth, security, packet loss, packet latency, packet jitter and cost. The link selector 64 obtains this information from the application requirements database 38 through the application requirements controller 42.....” (see Figures 1 – 4 and column 10 lines 41 – 61)

Spaur discloses, “As indicated in FIG. 2A, the application requirements for application A are obtained in accordance with step 100 and the corresponding operating parameters for each network channel 34a – 34n (i.e. communication service) are obtained at step 104. The link selector 64 checks or compares each application requirement (i.e. characteristic) with the corresponding parameter (i.e. service characteristic), for each such network channel (i.e. communication service).....After all network channels 34a – 34n (i.e. communication services) have been analyzed.....all channels (i.e. communication services) that have met all the application (i.e. communication) requirements (i.e. characteristics) are deemed to be network channels available for selection.” (see Figures 1, 2 and column 10 line 60 – column 11 line 11) which reads on, “means (64) for assessing service information received from a communication service provider (e.g., network, channel,

or link) by comparing the identified characteristic (i.e. factor or requirement) of the communication (i.e. application) to be executed with corresponding service characteristics (i.e. operating parameter) of each of a plurality of communication services (i.e. channels) (see col. 6, lines 52-67; col. 9, line 37 - col. 10, line 40; col. 11, line 47 - col. 12, line 12; Figs. 2-4);

Spaur further discloses, "The network channel selection apparatus **14** also includes a link controller/monitor **50** that is operatively connected to network interfaces **30** for receiving information....takes responsibility for control and status of network channels **34a** – **34n**.....has access to a communication link database **54**.....this database **54** also contains information or data related to operating parameters (i.e. service characteristic) of the network channels **34a** – **34n**....The network channel selection apparatus **14** further includes a link selector **64** that functions as the main controller of the system and includes one or more processing units in connection with the analyzing process for the selection of one or more network channels (i.e. communication services) through which information is to be transferred for the current application (i.e. communication objective). With regard to conducting the analysis, the link selector **64** utilizes the application requirements (i.e. characteristics) for the particular application (i.e. communication objective), together with the operating parameters (i.e. service information) for the network channels **34a** – **34n**....." (see Figure 1 and column 9 line 37 – column 10 line 28) which reads on, "means for selecting a communication service (i.e. channel) from the communication service provider (e.g., network, channel, or link) having the service characteristic (i.e. operating parameter) that correlates most closely with the identified characteristic (i.e. requirement) of the

communication (i.e. application) to be executed by the device (see col. 6, lines 52-67; col. 9, line 37 - col. 10, line 40; col. 11, line 47 - col. 12, line 12; Figs. 2-4)."

Regarding **Claim 18**, Spaur discloses the method as set forth in **claim 17**, further comprising:

"means (50) for receiving the service information (i.e. operating parameters) from the communication service provider at the device (10)." as disclosed by, "The network channel selection apparatus **14** also includes a link controller/monitor **50** that is operatively connected to the network interfaces **30** for receiving information there-from and making requests thereto. In particular, the link controller/monitor **50** takes responsibility for the control and status of the network channels **34a - 34n** (i.e. communication services)." (see Figure 1 and column 9 lines 37 - 42).

Regarding **Claim 19**, Spaur discloses the method as set forth in **claim 18**, further comprising:

"means (50) for requesting service information (i.e. operating parameters) from the communication service provider (i.e. channels)." which is disclosed by, "The network channel selection apparatus **14** also includes a link controller/monitor **50** that is operatively connected to the network interfaces **30** for receiving information there-from and making requests thereto. In particular, the link controller/monitor **50** takes responsibility for the control and status of the network channels **34a - 34n** (i.e. communication services)." (see Figure 1 and column 9 lines 37 - 42).

Regarding **Claim 20**, Spaur discloses the method as set forth in **claim 19**, further comprising:

“means (64) for weighting the identified characteristic (i.e. requirement) of the communication (i.e. application) to be executed,

means (64) for comparing the weighted characteristic of the communication (i.e. application) to be executed to corresponding service characteristics (i.e. parameter) of the service (i.e. channel) information.” are disclosed by “The network channel selection apparatus 14 further includes a link selector 64 that functions as the main controller of the system and includes one or more processing units in connection with the analyzing process for selection of one or more network channels through which information is to be transferred for the current application. With regard to conducting the analysis, the link selector 64 utilizes the application requirements for the particular application, together with the operating parameters for the network channels 34a – 34n (i.e. communication services).” and “With reference to FIG. 4 as well, the description will continue regarding the operation of the link selector 64..... the associated weighting vector for each such requirement (i.e. characteristic) for application A (i.e. communication objective).....each such weighting vector is combined with its associated parameter (i.e. service characteristic) value using a suitability function.....is performed by which each of the suitability values that was determined is compared to each other.” (see Figure 1 – 4 and column 10 lines 15 – 24, column 11 lines 12 – 66).

Response to Arguments

4. Applicant's arguments with respect to claims 1-13, 15-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Willie J. Daniel, Jr. whose telephone number is (703) 305-8636. The examiner can normally be reached on 7:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on (703) 305-4379. The fax phone

Art Unit: 2686

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WJD,JR
20 October 2004

Marsha D. Banks-Harold
MARSHA D. BANKS-HAROLD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600